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SECOND EDITION — ENLARGED

EVOLUTION

EXPLAINED

AND

Compared with the Bible

WM WOODS SMYTH.

EVOLUTION EXPLAINED

AND

COMPARED WITH THE BIBLE;

GIVING A SCIENTIFIC INTERPRETATION OF THE
ATONEMENT.

BY
WILLIAM WOODS SMYTH,

L.R.C.P., Fell. Med. Soc. Lon.;

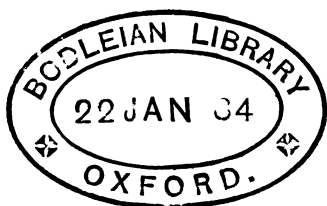
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"The Atonement and Modern Science."
"The Government of God," etc.*

Second Edition, enlarged.

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1883.

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I dedicate this Book—

**“Unto Him that loved us, and washed
us from our sins in His own
Blood.”**

PREFACE TO THE FIRST EDITION.

The Adversaries of the Doctrine of Evolution frequently say, that it has not been scientifically verified, and therefore, ought not to be accepted. Like the adversaries of the Bible, they demand evidence, which in the nature of the case cannot now be produced, and reject the light of such evidence as we do possess. But no man can do this and be truly honest. The jury box, and on their oath, is not the only place where upright men are called upon to decide their minds by *the weight of evidence*.

The whole evidence before our minds at this hour is divided into two classes. There is first, a limited amount of evidence which can be shown to harmonise both with the "special creation" doctrine, and with the doctrine of Evolution, *and which therefore proves neither*. And there is secondly, a larger amount of evidence, impossible to reconcile with the special creation hypothesis, but which supports entirely the Doctrine of Evolution. This, I contend, amounts to a legitimate proof of Evolution, and proves conclusively that the special creation hypothesis is untenable.

▲

But, if at present, we have not a sufficiency of evidence from Nature before us to entirely verify the Doctrine of Evolution, I contend that we find enough evidence from the Bible to give it scriptural proof, and give us, for the first time in all history, a *bona fide* Science of Religion, or a Theology in deed, and not in name only.

For a more extended treatment of the subject, I must refer the reader to "The Government of God." I have again to thank my cousin, R. Woods Colquhoun, for aid rendered while the work was in the press.

W. W. S.

Maidstone,
March, 1883.



PREFACE TO THE SECOND EDITION.

The welcome appearance of other works, and of public interest in the subject of which this and other writings of mine treat, induce me to give of them a brief history.

Twelve years ago I read for the first time the "Origin of Species," by the late Charles Darwin. As I read that work its leading thoughts immediately united themselves in my mind with certain leading doctrines of the Bible. I next read the works of Mr. Herbert Spencer, and in like manner their manifold, and to me, manifest testimony to the truth of the Scriptures greatly interested and delighted me. This simple perception, (without my taking thought) of the profoundest harmony where others* as yet saw nothing but contradiction and opposition, I have always attributed to the teaching of the Spirit of God.

In the year 1873 I wrote a work entitled "The Bible and the Doctrine of Evolution," (E. K. Lewis, Gower Street, London) containing many of these thoughts. The preface stated that :—

* I refer to the whole system of Evolution, not to Harmonies touching Genesis and Geology.

"This work accepts, almost without qualification, the Doctrine of Evolution, as interpreted by Mr. Herbert Spencer and Mr. Charles Darwin; and connects it with the Bible, as but the physical or natural side of its own Doctrines, which it illustrates, extends, confirms."

The work, though very crude and immature, was freely noticed by the press. Among others, three London daily papers, *The Pall Mall Gazette*, *The Morning Post*, and the *Standard*, gave it considerable attention. The same year it became the subject of a paper read before "The Maidstone and Mid Kent Natural History and Philosophical Society," by Stephen Monckton, M.D., F.R.C.P., Lon: Vice-President of the Society, from which I take the following :—

"He affirms that such masterly minds as those of Spencer, Darwin, and Bain, have been elaborating by their own researches, systems, which, unconsciously on their part, were in perfect accord with the cosmogony or physical philosophy of the Bible; but that they had stopped short in the work which the Bible had completed; because they failed to recognise that the progress of man under a spiritual regime since Adam, was determined by the very rules and precedents which had operated throughout all previous time, and that the future destiny of both men and nature, as foretold by Scripture, followed harmoniously down the very stream which they had traced so clearly through the earliest part of its course. Such an undertaking differed utterly from the old and frequent attempts to reconcile Genesis and geology."

The book contained fifteen chapters treating of the *Scriptural revelation of God*, of *Life and its Evolution*, of *Development and Degeneration* as the consequences respectively of *Obedience and Disobedience to Natural Law*, of *Man and his Environment*, of Mr. Herbert Spencer's

definition of *Eternal Life*, The *Mosaic Cosmogony*, and the several *Dispensations*.

Part of the edition was destroyed by a fire at the printers; subsequently I withdrew the book from publication, mainly because it was cast in an ultra-calvinistic mould, and I had changed my views in this regard.

I purposed immediately writing another, but at this time Evangelistic work engaged my attention, and I abandoned the subject for years, employing all my leisure time in preaching the gospel in the streets and halls of Maidstone, sometimes quoting Evolution as well as the Bible in my addresses. The Lord was with the message, and many were soundly and permanently converted through its truth.

In the beginning of 1882 I was distinctly prompted by the Lord to write again on this important subject. Accordingly, getting up earlier every morning, I hastily wrote "The Government of God," notices of which appear at the end of this volume. It appeared in August, 1882, part of the edition going to subscribers.

In the beginning of the present year, '83, the first edition of the following work was published. This, the second edition, contains nearly one half more additional matter.

W. W. S.





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EVOLUTION EXPLAINED.

CHAPTER I.

THE TWO GREAT SYSTEMS OF KNOWLEDGE.

AFTER several thousand years of Human History and Development, of immense advances in Civilization and Knowledge, the world to-day, wonderful to observe, reads for its instruction a Book, which dates before the rise of its history, civilization, or knowledge. It now possesses two great Systems of Knowledge. One is the outcome of human experience, of enquiry and investigation carried on for some thousands of years, and is still advancing; the other dates from before these thousands of years began, comes to men without any research on their part, and has closed its canon nearly two thousand years ago. This is manifestly a remarkable thing.

Acknowledging the truth of both systems, it is not remarkable that they should at least appear to be more or less in conflict. The ancient Bible being true, then, as a completed system of knowledge, written in an ancient tongue, how could it be expected to harmonize throughout with a system in process of completion?

These last years have seen, however, in the unification of the Sciences, in the cancelling of many of their errors,

aberrations, and imperfections, and in the simplification of their principles, the rise of a "Synthetic* Philosophy," giving us in certain ways a completely-unified system of knowledge, which we may well, so far as it goes, place side by side with the Bible, and employ most usefully in its interpretation. Meanwhile, the apparent discord noticeable between Science and the Bible has helped to produce much scepticism as to the claims of the latter. Minds which have been accustomed to derive knowledge solely by their own research or that of others, are most unfriendly to the notion of a wisdom descending from the skies to men. Sceptical and rationalistic rejections of the Bible have, therefore, become common ; and of its leading themes, which lie beyond the range of human research, such as the personality of God and a life beyond the tomb, it has now become fashionable to affirm that nothing is known, neither can be known. To this form of unbelief, the name Agnosticism† has been applied.

Leaving for the present "the invisible things" of God, let us look at "the things that are made." Modern philosophy, or that system of knowledge known as the "Doctrine of Evolution," is without doubt the most perfect system of knowledge of "the things that are made," which we possess, and therefore beyond every other system of human knowledge, it must show us more clearly of God, and must aid us in interpreting His word. With this aim, as intended by this work, we shall begin with Simple Evolution, which is easy enough to understand. At the outset let it be remembered that the system of Evolution does not concern itself with the first

* From the Greek *syn*, together, and *tithemi*, to put or set.

† From *a*, not, and *ginosko*, to know.

origin of things. It deals with the origin of their combinations and modifications, with their elaborations, developments, descents, etc. Professor Haeckel says, "Creation in the former sense, as the *coming into existence of matter*, does not concern us at all. This process, if indeed it ever took place, is completely beyond human comprehension, and can, therefore, never become the subject of scientific enquiry.*

CHAPTER II.

THE EVOLUTION OF THE EARTH.

WHEN we see our breath condense upon the window pane on a frosty morning into a dewy cloud, and afterwards form itself into the well known leaf-like figures, familiar to us in the frosts of winter, we behold an example of simple Evolution. The *indefinite, unformed cloud of breath condensed*; at the same time *its heat was dissipated*, and at the same time also it passed into a *definite, formed* state. This is what is continually going on in the great process of Evolution. The trembling molecules of watery vapour gave away their *motion* or *heat* to the surrounding air and ether, they fell together and arranged themselves in forms according to their affinities.

The goal of the process is one of equilibrium, of Balanced-Rest. The vapour of the breath by reason of its relative heat or molecular motion, is in an unstable state; parting with its heat or motion it descends to a state of equilibrium, hence the process may be called one of *Equilibration*.

* History of the Creation. Trans. by Prof. Lancaster. Page 6.

Now we know that the same laws exhibited in this simple event, hold good in the case of quantities of matter of larger dimensions. The vast clouds of vapour which ascend from the earth by the selfsame laws condense into little spheres of water, into the beautiful snow flakes, and solid ice. It is known that other substances exist, and can be made to exist in a state of vapour as well as water. Iron, for example, and all the metals when heated sufficiently, rise into vapours, and the vapours of iron or other metals condense again when they lose their heat, like the breath,—condense into *forms* and *shapes*, according to their several natures.—And all these are examples of simple Evolution in its simplest form.

The solid earth is composed of a great variety of substances, and an examination shows that it has been condensed out of a liquid mass, and most likely also out of a great cloud of vapour. According to the teaching of certain leading men of science, there was a time, when by reason of fervent heat the solid earth formed part of a great cloud, a fiery cloud, like a whirlwind infolding itself, such as Ezekiel saw in his vision by the river Chebar. And by the selfsame laws by which our breath condenses on the window pane, the great cloud slowly condensed into the several worlds, including the earth, which are now revolving round the sun ; the sun itself being the last central portion of that great revolving fire. And thus the process by which all this came about is named Simple Evolution. Further on we shall see that *after the manner of the vision of the Prophet*, modern science also teaches that the Living Creatures of the earth have come forth out of the nebular cloud by the same great process.

When we were considering simple Evolution above, we

took for the sake of simplicity the vapour of a single substance, as water or iron; but now we are considering a cloud of vapour composed of many diverse substances, for such was the great cosmic* cloud of the Solar System. From being in a state of gaseous vapour that cloud condensed into revolving rings, and finally into spheres flattened at the poles by reason of their rapid rotation; and thus our earth was at one time a sphere of molten matter rotating on its axis much more rapidly than at present and surrounded with a great atmosphere of uncondensed gases.

As the ages went by, the great heat of the earth became dissipated, its surface cooled, and a solid crust formed upon it. Some of its gases united to form water, which now, as a heavy mantle of vapour, surrounded the entire globe, and began to condense and fall upon its surface, only to be turned into vapour again. At this period we have that state of the earth so admirably described in the following words of Scripture:—"And the earth was without form and void, and darkness was upon the face of the raging deep."† "When I made the clouds the garment thereof, and thick darkness a swaddling band for it."

Further loss of heat, at length allowed of the formation of many waters upon the earth by the condensation of her thick garment of watery vapour, and for the first time at this period Light pierced the gloom, and shone upon the new-born earth. That light was not the light of the sun which shines to-day, but was of the central mass of con-

* From *Komos*, the world, or universe.

† So the Hebrew.

densing nebular matter which later on became the sun and perhaps one or more planets as well. Thus Science interprets for us the Scriptures touching the dawn of light upon the world; and Scripture, having for its supreme aim the revelation of God as the great cause of all things, in the sublimest and yet most simple language utterable, says, "And God said, Let there be light, and there was light." Considering the powerful influence which light has upon the minds of men, as illustrated in the higher though idolatrous worship of many nations, what perfection do we see in these simple words of Scripture! We might offer a prize of a million in gold to the man who, recognising all the circumstances involved, would surpass these words, and fail to find him. We know from science that there was light before the earth ever was, and from philosophy we know that it is one of the effects wrought in us by Infinite Being, and is a form of manifestation of Infinite Being. Speaking for simple minds, therefore, of the *origin* and *existence* of light *in relation to this world*, no words could be more perfect. And no period of duration could be more perfect of which to write, than that in which the light first shone out of the thick darkness of the earth's swaddling band of clouds, and gave for the first time its quickening ray to this new world.

Hitherto we have been dealing with Simple Evolution, now we enter upon the consideration of Compound Evolution. The great variety of elementary substances of which the earth is composed, all having different natures, by further loss of heat had these specific differences more manifested. The fervent heat, heretofore common to all, had veiled these differences.

At this period there was no real separation between the

waters condensed upon the earth and the waters in the form of clouds continuously condensing and continuously being turned into vapour and cloud again. There was no clear heaven. And of this period we find the Bible speaking of two simple processes as then going on, which are fundamental ones in the system of Evolution, and to which Mr. Herbert Spencer gives great importance in his "First Principles." They are "Differentiation" (that is, *a dividing*), and "Segregation" (that is, *a gathering together*). It is written, "And God said, Let there be a firmament [that is, *an expanse*] in the midst of the waters, and let it divide the waters from the waters. And God made the firmament, and divided the waters which were under the firmament from the waters which were above the firmament, and it was so." (The Hebrew verbs express *continuity of action*.) Again, "And God said, Let the waters under the heaven be gathered together into one place, and let the dry land appear, and it was so."

As the cooling of the earth advanced, we can imagine how parts of the earth's crust would be upheaved, and how other portions would sink in the molten central fire; and later in time, as the crust of the earth became thicker, the like process went on more slowly. And we can picture to ourselves how the volume of condensing waters increased upon the earth, covering all, or nearly all its surface,* because the crust of the earth was not yet rigid enough to bear a mountain or a highland upon it. By the continuation, however, of the self-same simple changes

* Some geologists, who object to the thought of an universal ocean, have neglected to allow for the high degree of rigidity required for highlands on such a globe as the earth, when exposed to tensions and perturbations within and without.

we have been noticing, in the admirable language of Scripture, "The mountains were brought forth" (Ps. xc.) and the waters became "gathered together into one place."

Later in time, when the earth became more rigid, its crust became subject to the wear and tear of its great oceans of water and air; its rains, rivers, and tides, all upon a scale beyond anything we witness now, wore away the rigid crust, forming great flats of mud-banks to harden into various rocks, or remain as wide wastes of clay. And thus, by the continuous action of the central heat of the earth, by the varied movements in upheaval and subsidence of the crust of the globe, and the denudation of water, air, and ice, the earth took the form in which we behold it to-day, in continents of land and great oceans of water, in mountains and valleys, in hills, dales, and plains, in rocks and clays of many kinds, variously scattered about, according as their several physical natures and relations determined their specific places of location, their forms, and dimensions, etc.

Now, observe, *all these changes and conditions at any period were the exact outcome of the continuous distribution of matter and of heat-motion, according to the process of Evolution.* The matter of the globe condensed or integrated, the heat-motion was dissipated, the indefinite, unformed earth took on definiteness and order, as varied and multiform as the many elementary substances in its condition determined. And in this increased complexity we recognise Compound Evolution.

Manifestly no one would think of supposing that God interfered *miraculously* at any stage in this great process. It is sufficient to acknowledge that His was the Energy which continuously wrought, and that this process was the

law of His operations. Further on we shall find, startling though it may appear, *that if we express the principle of the moral law of God in Dynamic* terms, it is none other than the self-same fundamental principle of this Law.*

No one supposes that when our breath condenses into water on the window-pane that God miraculously interferes to make the little spheres of water, and when they again form into fern-like leaves no one supposes that he interferes to form them. No more can we suppose that He interfered in the condensation of the great cosmic nebular cloud into the several worlds and the sun.

In the beginning He endued the *structural units* of the universe, namely the molecules, with the nature and powers necessary for all these effects.

Clark Maxwell says, "Each molecule throughout the universe bears impressed upon it the stamp of a metric system as distinctly as does the metre of the Archives at Paris, or the double royal cubit of the temple at Karnac.

"No theory of evolution can be formed to account for the similarity of molecules, for evolution necessarily implies continuous change, and the molecule is incapable of growth or decay, of generation or destruction.

"None of the processes of Nature, since the time when Nature began, have produced the slightest difference in the properties of any molecule. We are, therefore, unable to ascribe either the existence of the molecules or the identity of their properties to any of the causes which we call natural.

"On the other hand, the exact quality of each molecule to all others of the same kind gives it, as Sir John Herschell has well said, the essential character of a

* From *dynamis*, power or force.

manufactured article, and precludes the idea of its being eternal and self-existent.

“In tracing back the history of matter, Science is arrested when she assures herself, on the one hand, that the molecule has been made, and, on the other, that it has not been made by any of the processes we call natural.”

CHAPTER III.

THE EVOLUTION OF LIFE.

IT has been before mentioned (page 3) that Evolution does not deal with the first origin of things, but only with their successive changes and modifications. A few men of science affect to believe that Life arose spontaneously out of powdered rocks, salt water, and sunshine, though neither they, nor others, by taking thought have ever been able to produce life under the most favourable circumstances; nor has anything ever occurred in the million multiform chemical actions and reactions of everyday occurrence, to suggest the possibility of such a thing. Spontaneous generation (so called) reveals only the readiness of even men of science to be absurdly credulous when they speak of their own. Spontaneous generation is therefore an unfounded assumption, and has no part or lot in true science, *which admits only of adequately attested truths.*

Although all may see how absurd it would be to suppose that God miraculously interferes to turn vapour into water, or water into crystals of ice, or even to turn the original cosmic cloud or the primeval molten earth into its present

varied form, yet many cling to the notion that He did interfere in the kingdom of life. They suppose, that when the earth was in an unformed and simple state God created upon it a low form of vegetable and animal life; that when seas came to be He then created fish in them; when some land appeared he made reptiles, when the atmosphere allowed thereof He formed birds, and when the solid earth permitted it, He made cattle, and finally man himself. And all these we are asked to believe God made by so many *miracles of special* creation. His ways, we are told, in spite of Isaiah lv. 8, are so much like our ways that like the Farmer, He waited for the several seasons before He planted the earth. Although the Lord Himself came upon this earth by natural descent, excepting only, that he was solely of the *seed of the woman*, yet for a Fish or a Bird we must needs have a *special creation* of Almighty God! The wise men of Christ's day were offended at the thought of the Messiah coming thus. They expected Him to come suddenly, to march in from the Wilderness, etc. Their ideas were of the *special* and cataclysmic kind, as are the ideas of many mistaken, but, we hope, well-meaning race of modern theologians.

The true weight of evidence shows that the kingdom of Life came forth just as the kingdom of material objects came forth, namely by a series of *descents*, even as the Bible teaches, saying of the whole creation, physical and vital, "These are the generations (Hebrew, *descents*) of the heavens and the earth."

Accordingly, we believe, that living creatures are bound together by the ties of Hereditary Descent, and by this, I think we shall be able to explain the mysterious Cherubim or composite Animal figures of scripture. The older

Naturalists in classifying the Kingdom of Life unconsciously arranged them in a manner strongly suggestive of their common descent. The observed facts of natural history led them to make a system of classification like unto a tree. The trunk represented the lowest living creatures, which soon divides into two great divisions, namely the animal and vegetable kingdoms, and these two great divisions continue to divide, ramify and subdivide, into classes, families, orders, genera, and species.

It is manifest in this arrangement of living creatures, that these Naturalists, without intending it were nevertheless indicating the lines of generic relationship of living organisms.

The distribution of Life presents us with evidence in support of Hereditary Descent. The great barriers of oceans, seas, deserts, rivers, and mountains, separate, more or less Life on the globe. Southward, we observe the great continents of Land lying *widely* apart, and there we find the *widest* differences in the animal and vegetable productions. Northward, the dry land joins, and here we find they have much more in common. The *minor* barriers on the continents themselves exhibit the same phenomena in *minor* degrees. Add to this the important fact that the same holds good of their fossil ancestors.

The oceanic islands furnish instructive evidence. The species of animals and plants (that is the uttermost twigs on the tree of life) often differ from all others, yet their genera (that is, the branches from which the twigs have been represented as springing) resemble the plants and animals of the nearest continent. Obviously the continents must have furnished the original types, and external conditions in the course of time wrought the specific changes.

Dr. George J. Romanes says,* “In no part of the world is there an oceanic island more than a certain distance from a main land in which any species of the larger class of frogs, toads, and newts is to be found. Why is this? Simply because these animals and their spawn are quickly killed by contact with sea water. * * * Similarly in all oceanic islands situated more than three hundred miles from land, no species of the whole class of mammals is to be found, excepting species of the only order of mammals which can fly, viz., bats. And, as if to make the case still stronger, these forlornly created species of bats sometimes differ from all other bats in the world. But can we, as reasonable men, suppose that the Deity has chosen, without any apparent reason, never to create any frog, toad, newt, or mammal on any oceanic island, save only such species as are able to fly?”

* * * * *

“I will adduce another very remarkable fact, viz., that on some of these islands there occur species of plants, the seeds of which are provided with numerous hooks adapted to catch the hair of moving quadrupeds, and so to become disseminated. But, as we have just seen, there are no quadrupeds on these islands to meet this case of adaptation; so that special creationists must resort to the almost impious hypothesis, that in these cases the Deity only carried out half His plan, in that while He made an elaborate provision for plants which depends for its efficiency on the presence of quadrupeds, He nevertheless, after all neglected to place the quadrupeds in the same islands as the plants!”

* * * * *

* “The scientific evidence of organic Evolution.”

“Perhaps in sheer desperation, however, the special creationists will try to take refuge in the assumption that oceanic islands differ from continents in not having been the scenes of creative power, and have therefore depended on immigration for their inhabitants. But here again there is no standing room ; for we have already seen that oceanic islands are particularly rich in peculiar species which occur nowhere else in the world ; so that, as a matter of fact, if the special creation theory is true, we must conclude that oceanic islands have been the theatres of extraordinary creative activity ; although an exception has always been made to the detriment of frogs, toads, newts, and mammals, save only such as are able to fly.”

As has been repeatedly mentioned, the origin of Life, like that of matter, is beyond the realm of science. By faith in Revealed Truth we know, touching the origin of matter, that “In the beginning God created the heavens and the earth,” and touching the origin of Life, that “The Spirit of God brooded over the face of the waters.”* After the creation of matter the Evolution of its many forms followed as above described, and after the begetting of living matter by the Spirit of God, the Evolution of its many forms followed as I am now about to describe.

Simple living matter, like the cloud of our breath or the primeval cosmic cloud, is seen to be in an indefinite, unformed state, and like them its Evolution is a process of progression towards definiteness and form, and also to equilibrium. As a familiar illustration we may take an egg, and mark how the indefinite germ and surrounding

* The idea of progressing is not found in the verb, and the verb is never used in reference to the wind.

matter come to be built-up, and built-in to the definitely formed bird. This is just an epitome of the *development of the higher animals* in the long ages of geologic time, and of the two the development of the egg is certainly the more wonderful.

Living matter is, however, distinguished from ordinary or non-living matter by characters which are profoundly significant. It possesses the power of *independent action*. "We behold the material universe massed together in more than adamantine ties of its own, and flowing together in orders absolutely timed, and originated altogether beyond our ken; but when we come to the lowest form of life we have to contemplate with amazement a Being which originates actions of its own, in times of its own—that rough-hews its ends, let the providence of the outer world shape them as they may."* By reason of this measure of *independent action*, Life *acts* on the purely physical world, and the physical world *acts* upon Life, and again it *re-acts* upon the physical world. It has thus come to pass, that Living matter has ever been forming itself by its own inherent active powers, and was at the same time ever being formed by the forces of its outer world.

In illustration of the powerful influence which the states and changes of the external physical world have upon Life and Living creatures, I quote the following from Prof. Haeckel's "History of the Creation."† :—"Our commonest indigenous snake, the ringed snake, lays eggs which require three weeks time to develope. But when it

* "The Government of God," pp. 55, 56.

† Vol I. p. 240. English Ed. Prof. Lankester.

is kept in captivity, and no sand is strewn in the cage, it does not lay its eggs, but retains them until the young ones are developed. The difference between animals producing living offspring and those laying eggs is here effaced simply by the change of ground upon which the animal lives."

"Tritons are amphibious animals, nearly akin to frogs, and possess like the latter in their youth, external organs of respiration—gills—with which while living in water, they breathe the air dissolved in the water. At a later date a metamorphosis takes place in tritons as in frogs. They leave the water, lose their gills, and accustom themselves to breathe with their lungs. But if they are prevented from doing this [that is, from leaving the water] by being shut up in a tank, they do not lose their gills. The gills remain, and the water salamander continues through life in that low state of development, beyond which its lower relations, the gilled salamander (or *sozobranchiata*) never pass. The gilled salamander attains its full size, its sexual development, and reproduces itself without losing its gills."

"Great interest was caused a short time ago, among zoologists, by the *Axototel*, (*siredon pisiformis*) a gilled salamander from Mexico, nearly related to the triton; it had already been known for a long time, and had been bred on a large scale in the zoological gardens in Paris. This animal possesses external gills like the young salamander, but retains them all its life like all other *sozobranchiata*. This gilled salamander generally remains in the water with its aquatic organs of respiration, and also propagates itself there. But in the Paris garden, unexpectedly, from among hundreds of these animals, a

small number crept out of the water on to the dry land, lost their gills and changed themselves into gill-less salamanders, which are not to be distinguished from a North American genus of tritons, (*Amblystoma*) and breathe only through lungs. In this exceedingly curious case we can distinctly follow the great stride from water-breathing to air-breathing animals."

Now since Life in its simpler and more primitive forms was much more liable to be changed by forces affecting it than the above more highly organized and permanent ones, we may see that in primeval eras living forms must have undergone rapid, manifold, and great alterations at the incidence of external changes affecting them.

Simple Living matter is observed to be in a state of great activity of its own. This as has been said is profoundly significant. Besides the Deity himself, Life is the only other worker in the universe; He works and Life works and there is not another. He has conferred upon it his own loftiest attribute, but has jealously guarded the same, by giving it a Law to which it must conform itself and its action, or render up its being; and its entire genesis or evolution as we shall see, is nothing less than its learning to conform itself and its activities to this Law as expressed in the states and changes of its environment.

Speaking of living matter, Professor Allman says, "While we watch it beneath the microscope, movements are set up in it; waves traverse its surface, or it may be seen to flow away in streams, either broad and attaining but a slight distance from the main mass, or else stretching away far from their main source, as narrow liquid threads, which may continue simple, or may divide

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into branches, each following its own independent course; or the streams may flow one into the other, as streamlets would flow into riverlets and riverlets into rivers, and this not only where gravity would carry them, but in a direction diametrically opposed to gravitation; now we see it spreading itself out on all sides into a thin liquid stratum, and again drawing itself together within the narrow limits which had at first confined it, and all this without any obvious impulse from without which would send the ripples over its surface, or set the streams flowing from its margin. Though it is certain that all these phenomena are in response to some stimulus exerted on it by the outer world,* they are such as we never meet with in a simple physical fluid. They are spontaneous movements resulting from its proper irritability, from its essential constitution as living matter."

* * * * *

"Liquid as it is, it is a living liquid, organless and structureless as it is, it manifests the essential phenomena of life." †

Dr. Lionel S. Beal says of living matter or Bioplasm [the protoplasm of other writers], "This wonderful matter to which I shall have frequently to refer in every part of this volume, ‡ *moves and grows*. Everything else in nature may *be moved and caused to increase* by aggregation by particles being added to those already collected; but this alone of all matter in the world

* This the reader will observe is a pure assumption unsupported by the evidence and comes of the bias of modern materialism.

† Professor G. J. Allman in his address as President of the British Association in 1879.

‡ Bioplasm, by Dr. Beal.

moves towards lifeless matter, incorporates it with itself, and communicates to it in some way we do not in the least understand, its own transcendently wonderful properties. *The matter in question is living matter.*

* * * * *

“ It may be correctly called *living* or *forming* matter, for by its agency every kind of living thing is made, and without it, as far as is known, no living thing ever has been made, or can be made at this time, or ever will be made.”

The Amœba is an example of the simplest form of living things. It is a living jelly, organless and structureless; yet it moves, eats, digests, assimilates, secretes, respire, reproduces its kind; it is irritable, automatic, and contractile. According to Prof. Michael Foster, “ All the physiological phenomena of the higher animals are similarly the results of these [above mentioned] fundamental qualities of protoplasm peculiarly associated together.”* I may add that living matter exhibits simultaneous and alternative movements of an infinitely indefinite kind; it is seen to reach strongly towards matters which afford it nutriment—it hungers and thirsts; and as might be expected, from its multiform indefinite movements, it has great power of varying. Finally, the simplest living matter is seen to exhibit movements which have a distinct connection with its preservation, as when upon the application of cold, it shelters itself from the chilling influence.

These being the leading attributes of life, it is only in harmony with the same that it should take on a Body or Organization *after their image and likeness*. The Evolution of Life has however been greatly beclouded by the

* Text-book of Biology.

materialistic bias of its leading expounders. Unwilling to make use of the above mentioned *original attributes* of living matter, and hankering after barren chemical and physico-chemical action, they offer us explanations and interpretations which are erroneous and inadequate, and an inadequate explanation is as bad as no explanation at all.

We have seen that the world in which life was first brought forth was very simple, and we have seen that so also was life itself. Simple unformed life, (with manifold endowments however), was therefore at the outset in harmony or *correspondence* with the simple and unformed state of the world. It was in *equilibrium* with its *environment*. But the world according to the Word of God began to assume form and order. The Land divided itself from the Water, dry land and deep seas appeared, the mountains were brought forth and manifold changes arose. Now it is easy to see that the ceaseless and multiform activities and variations of living matter must have taken advantage of these new changes. Many variations on the lines of Life's leading attributes, viz., moving, eating, respirating, etc., arose, and out of the multitude of these Nature *selected* a few of the *fittest* to survive, and cut off the many *unfit* creatures from the congregation of Life. Let me sketch the order of events :—

Living matter very soon after it was begotten upon the earth, must have spread, in one simple form or another, over the whole world; it must have vitalized every available portion of the earth's surface, until a struggle for the means of subsistence between its simple forms arose. Since these forms were continually varying, it is manifest that all varieties which arose with any advantage in structure or function would have the advantage over

others not so favoured, would overcome these others, and flourish and multiply the more abundantly. From appropriating inorganic materials as sustenance, varieties would soon arise which would in the *struggle* appropriate living forms as sustenance, and this would increase immensely the *struggle for existence*. But again the law of *natural selection* and *preservation* of the *fittest*, or those having the advantage in structure or function, would ever hold good ; and thus we see the path open to the continual Evolution of higher and still higher forms of life. As the Evolution of the globe itself went on, ever offering new spheres and more complete conditions to the living creatures, so also *pari passu*, the Evolution of the creature went on, giving it fins for the water, wings for the air, and feet for the dry land. It was ever advancing itself into those new spheres which the earth offered. At an early date Life divided itself into two great kingdoms ; one section continued to derive its sustenance from the inorganic world giving the vegetable kingdom, the other section sought to organic matter for its food, giving the animal kingdom. These two kingdoms further divided and subdivided, and advanced in the scale of life to the multitudinous forms and orders we see around us to-day.

It has been a universal law common to all life since it was first manifested, and took upon it Flesh in this world, that it should ever be made perfect through suffering and death. From the time that every living creature appears on this world it finds itself in the presence of forces which tend to overthrow it and rob it of its being. Some of these forces are physical and some are vital. Universal competition for the means of subsistence reigns among all forms of life, and has reigned from the beginning. And

it is obvious in this struggle for existence the more perfect creatures must have the advantage, and survive, and the less perfect must succumb. Accordingly, the suffering of most creatures, the preservation of the fittest, and the death and exclusion from the Races of the unfit, are the inevitable outcome of the nature and relationship of living things. The plant, favoured by more strength, or by the more excellent strike of its roots in the direction of nutriment, waxes stronger than its fellows which encompass it, and in due course thrusts them to death, and flourishes the more from their decay—survives as the fittest, while its less fit fellows perish. The deer, which by acuteness of smell or hearing, and swiftness of foot, or by a well directed blow of his antlers escapes some beast of prey, is rewarded with longer life, while another who fails to elude its foe, suffers and dies in consequence. Again, the beast of prey from inability to catch food may suffer hunger, and fail and die also. All this holds good universally throughout the great kingdom of life.

But the desire for food is not the only exciting cause of competition among living creatures. Love is also an important incentive to struggle. "None but the brave, none but the brave deserve the fair," is a law of battle among many creatures, and in the case of birds of gay plumage and sweet song, it is the most beautiful and the most gifted which gain the day, and win the fair. A law of battle not unknown among men and women. Flowers, again, owe their developed charms to the selective ministry of insects. With quaint but singular truthfulness, Schiller has sung :—

"Meanwhile, until philosophy
Can keep the world a-going,
Its wheels are made to work
By hunger and by wooing."

Now manifestly the preservation of the fittest to a longer lease of life, and the influence of sexual selection determined, as a rule, the most perfect creatures to be the progenitors of the future generations, and their offspring would, as a rule, inherit their good qualities; and hence we perceive that by means of this war, suffering, and death, Living Creatures were ever being made perfect. In the words of Mr. Darwin:—"Thus from the war of nature, from famine and death, the most exalted object we are capable of considering, namely, the production of the higher animals, follow."* And of Mr. Spencer:—"That organisms which live thereby prove themselves fit to live, in so far as they have been tried; while organisms which die, thereby prove themselves in some respects unfit for living, are facts no less manifest than is the fact that this self-acting purification of the species must tend ever to insure adaptation between it and its environment.†"

An important complementary truth here requires to be noted, namely, the sufferings and death of those creatures which suffered and died, bore away from the Race its unfitness or imperfections, *in fact bore away its sins.*

Given the primeval state of the earth to be as is described in the opening verses of the first chapter of Genesis, and as certified to by geology; given the earth at this period to have been sown with Life (endued with the powers above mentioned) by the Spirit of God, then its Evolution as described *must* have taken place, the several living forms we see to-day *must* have been the outcome.

* Origin of Species.

† Principles of Biology.

CHAPTER IV.

THE EVOLUTION OF LIFE, CONTINUED.

IN the Evolution of Life there are a few leading principles which it is of the highest importance that the reader should understand, to enable him to comprehend certain great doctrines of the Bible and Christianity.

If we take notice of our own actions in an ordinary walk, we observe that we are continually *adjusting* ourselves to various objects and circumstances along the way. For example, we are keeping along the best road or path, we are avoiding collisions with other people or obstacles which may be in our way. We are at the same time making *adjustments* as to time, distance, place, etc. Many of these adjustments we accomplish consciously and voluntarily. At the same time, however, our brain and spinal nervous system are making many more involuntary adjustments of the moving mass of our bodies as we walk along, all of which we may be wholly unconscious of. Further notice shows us that all our life is made up of similar and manifold adjustments, in regard to "what we shall eat, and what we shall drink, and wherewithal we shall be clothed," and also our religious life is made up of similar adjustments in regard to what we believe to be the commands and will of God. And thus our whole life, individually, socially, nationally, and religiously, resolves itself into a great variety of *adjustments* in relation to our surrounding circumstances.

In the lower animals we notice the very same law,

though their range of adjustments is not so extensive as ours ; and when we examine the simplest living matter, we find that it exhibits similar powers. Examining the vital activities of Protoplasm or Bioplasm, we see how upon the approach of cold its living matter shelters itself, so to speak, from the chilling influence, and again upon the approach of heat its activities are seen to be renewed. The application of other agents also shows us the adjustments it makes or attempts to make to the external forces affecting it.

Here, then, is a law which, like the law of gravitation, is universal in its reign, as regards the realm of Life.

By making these adjustments every living creature is said to *balance* the forces of the outer world by its own inner forces. The force of gravitation would drag us to the earth, were it not counteracted or balanced by the vital forces of the body. We sometimes speak of preserving our *balance*, and the thought like that of adjust may be extended to all sides of our life. In scientific terms, every living creature is a moving mass in a balanced or *equilibrated* state with its circumstances, and it continues to live by in many ways preserving its balance, by so adjusting itself as to keep up the equilibrium between itself and its surroundings. If we fail to *adjust* ourselves to the events say of an ordinary walk on the streets of London, we are sure to reap the penalty of injury or death ; having failed to *balance* outer events by inner changes, these outer circumstances overthrow us partially or entirely.

Having got hold in some degree of the ideas which these words, Adjust, Balance, Equilibration, and Equilibrium have in relation to living creatures, let us look again at

the Evolution of life. When the primeval living matter subdivided itself into individual living creatures, it is obvious that all these were compelled to make adjustments to the surrounding conditions. If they adjusted rightly they continued to live; and by right adjustments are meant those which tended to preserve the life of the living thing. But if they failed to adjust themselves to the surrounding conditions or forces of the outer world, then they forfeited their life. In the words of Mr. H. Spencer, "Death or restoration of the physiological balance are the only alternatives."

When by reason of the multiplication of living creatures and the struggle for means of subsistence, varieties arose which preyed upon other living creatures for their food, a very much increased demand and sphere for adjustment arose. Each living creature had not only to adjust itself so as to balance the forces of the inorganic world, but it had now to adjust itself so as to balance the *living* forces of the organic world. Consequently, the *struggle* grew hotter. Every improvement in structure or in function which *variation* gave rise to, gave to the creature possessing it an advantage over others—gave it a longer lease of life, and therefore gave it many more offspring, inheriting as a rule its advantages, and thus raising them higher in the scale of life. But each higher platform in the scale of life became in turn the scene of competition and struggle as before, and then again out of this still higher forms of living creatures arose, still better adjusted to their outer conditions. Thus as the ages went by, and the world itself became more evolved, it became covered by living creatures specially distinguished as we see them to-day by their adaptation or adjustment to their surround-

ing circumstances. And since all these living creatures were thus moulded and brought forth by the ordinary forces operating around us, we are for the first time in all History able to interpret the words of the Bible which speak of the *earth bringing forth the living creature*, and also we see the meaning of the whole creation, animate and inanimate, being described by Scripture as a series of "Descents" or "Generations."

Let us by way of further illustration look upon the Life of the globe as one Creature, its outer world of matter and life as one, and it will be seen that the *bring-forth* or evolution of the creature was according to a great process of *Equilibration*. That is to say, in the beginning the outer world was "without form" and order, and the creature itself was without form and order. But the outer world was ever changing, was ever receiving form and order, and these changing conditions affected the creature. The creature itself was also changing and varying as we have seen, and was compelled to take on form and order *in relation* to the outer world, thus ever keeping up an *Equilibrium* between itself and its surroundings.

In this great Process, observe, that sometimes *the creature* adapted or *equilibrated itself* to its circumstances, and that sometimes *the circumstances* themselves *equilibrated* the creature to them. Take the case of the gilled salamanders (page 16). Had they been in the field of nature, and from some mutation the water in which they were living failed and they were all left on dry land, manifestly, these only which changed themselves into gill-less varieties could have lived, while those which failed to change with the changing conditions must have perished. These salamanders which thus adjusted themselves so as to

balance the outer change by their own inner change may be said to have equilibrated themselves *directly* to their environment, and hence this order of events is called Direct Equilibration.

But the changed conditions of the ever changing world as it took on form and order, were not all of the above character. Alterations came to pass which did not so affect the creatures as to alter them through their functions—changes arose which the creature was without ability to adjust itself to. These new changes went against the life of the living creatures, and they had no ability to respond, accordingly, all individuals which were *most* out of harmony or equilibrium with these changes died first, while those which possessed some small degree of harmony with the new changes lived longer, and had offspring. Now the effect of this was to change the breed, because the most unequilibrated varieties were cut off from among their fellows, while those which possessed some degree of conformity were left to breed in and in, it is obvious that this increased the amount of conformity to the new conditions. And this same course of events was repeated generation after generation, the unequilibrated individuals being killed off, the more equilibrated preserved until all the unfit particulars of the Race were eliminated and borne away through those which were slain, and the fit or congruous qualities accumulated and multiplied through those which were preserved, until equilibrium was reached, and the race was in this indirect way adapted to its environment, and this order of events is therefore called Indirect Equilibration. In Nature of course the two processes co-operated.

These two processes of Equilibration are distinct,

however, and as we shall see, are of the profoundest interest to the christian. Mr. Herbert Spencer has done much for Ethics by exhibiting to us the fore-types of human moral conduct in the nature and relationship of the lowest forms of life. I have carried his principles where as yet he has not carried them himself. Direct Equilibration is the fore-type of our dispensation of Law. The order of the states and changes of the creatures' outer world as a whole constituted the Law to which the creature had to conform itself and its actions. The terms were, under natural, as under governmental Law, *the creature that doeth these things shall live by them,** and in case of failure, *Death was the only alternative.†* Under natural Law and under governmental Law, the terms were, "The soul that sinneth, it shall die," or "The soul that committeth them, shall be cut off from among their people."

In the Process of Indirect Equilibration we have in part the fore-type of our dispensation of Mercy. The living creatures having failed, and being unable to adjust themselves to the Law of their environment, all hope of the equilibration of the Race lay *not in themselves* but *in their seed*. What the law of Direct Equilibration could not do through the weakness of the creatures of flesh, the law of Indirect Equilibration accomplished through their *seed*. "We see," says Mr. Spencer, "*that Indirect Equilibration does what Direct Equilibration cannot do.*" And so also of the generation of men, they have failed and become unfit, and have incurred the penalty of death, and all hope of their equilibration lies not in themselves but in the Seed which God has given to them; "For

* Romans x. 5.

† Mr. Herbert Spencer.

what the law could not do in that it was weak through the flesh, God sending His own Son [as the Seed of the woman] in the likeness of sinful flesh," has done.

Another important function of Indirect Equilibration, and the fore-type of a great christian doctrine, is, that when living creatures were brought into harmony or equilibration with their environment, *they were sustained in the same* by this process. That is, all imperfections which arose among them were cancelled by Indirect Equilibration. In the words of Mr. Spencer "this self-acting purification of the species must tend ever *to ensure adaptation between it and its environment.*"*

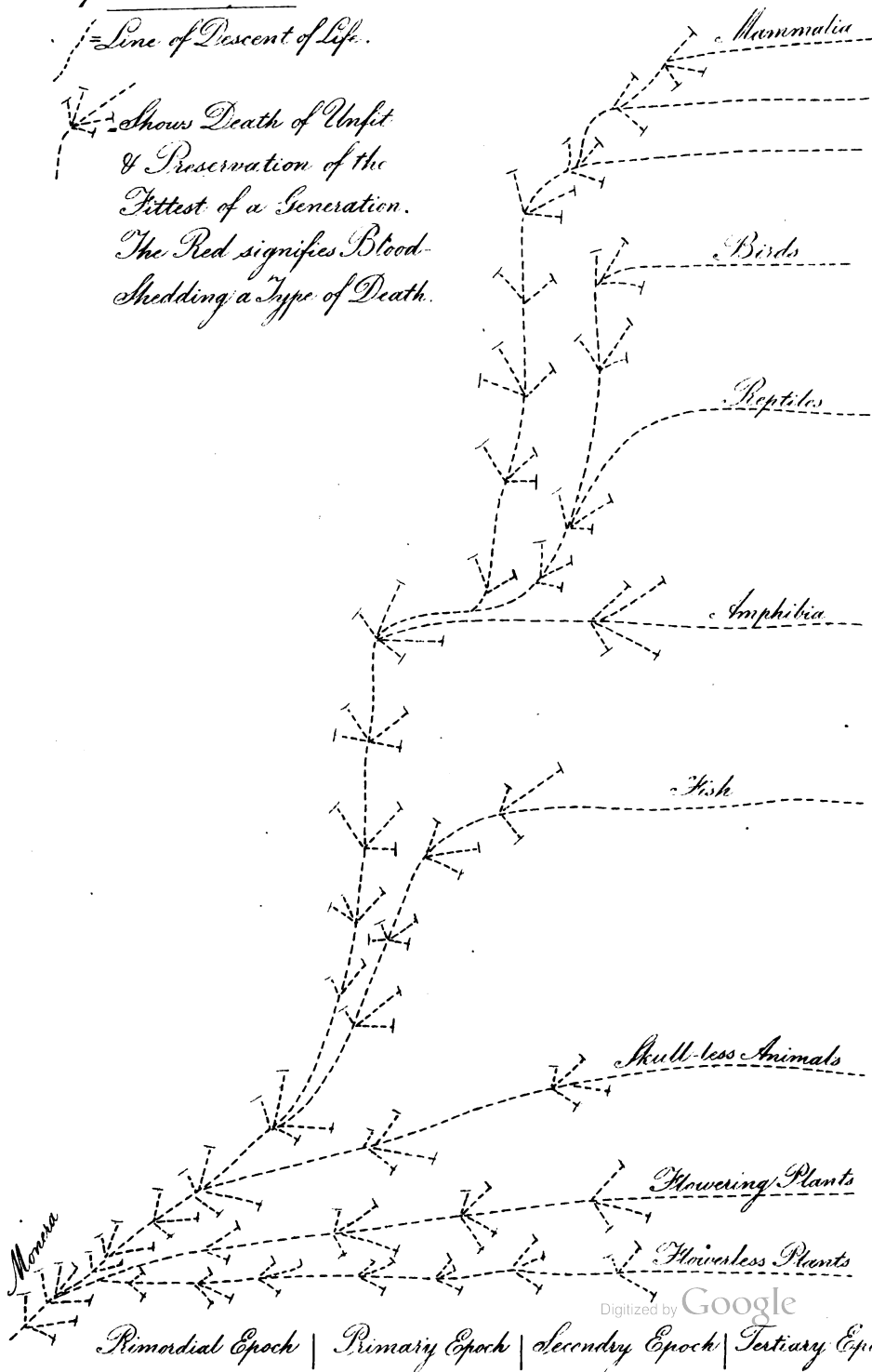
The accompanying diagram shows, so far as can be made out, the lines of descent of living creatures. A few generations of the myriads which have been are shown, the longest lines showing those which, having adjusted themselves more perfectly to their surroundings, lived the longest. They *obeyed* the Laws of nature better than others, were more equilibrated to them, and were rewarded by being Selected and preserved to a longer life. So that under natural law as under governmental law, the terms were "The *creature* which doeth these things shall live by them" (Romans x. 5.) The short diverging lines show those who failed to adjust, and in consequence died prematurely. The red cancelling mark shows their death, shed-blood being an excellent type of death. So that again under Natural Law as under Governmental Law, the terms were, "The soul that sinneth, it shall die," or, as recognizing an additional truth of Evolution, "The souls that commit them, shall be *cut off from among their people,*" a frequent scriptural phrase.

* Principles of Biology,—*the italics are mine.*

After Darwin & Huxley

Line of Descent of Life.

Shows Death of Unfit
& Preservation of the
Fittest of a Generation.
The Red signifies Blood-
Shedding a Type of Death.



Behold now the perfection of the Mosaic account of the Creation. Call to mind the difficulty which even the cultured classes of our day have in grasping the knowledge of the Evolution of the earth and its inhabitants; call to mind also the strong tendency of all mankind in every age, to attribute the origin and existence of things around them to beings which have no existence whatsoever; then mark well the History of Creation of the Book of Genesis. Superstitious vanities are set aside, and at the same time Philosophy's profoundest of truths is recognized by the reiterated declaration that all things are of God and by God. Dealing with things which arose slowly and *imperceptibly* out of the imperceptible, and have had unbroken lines of descent, the periods of their existence which the Bible seizes upon to speak of their creation is singularly fitting and significant. The case of Light has been mentioned, (page 6). No less perfect are the references to the vegetable kingdom, to gigantic reptiles and birds, to cattle, and to man.

Looking generally at the account of the creation, we perceive that only *three* creations of lower life are mentioned, which correspond to the *three* divisions of geology; and that the further quarternary period peculiar to man is represented in due order in the 27th verse.

There is also a perfect correspondence in the distribution in time which is very striking if we compare the account with a scale showing the comparative thicknesses of the different formations. The secondary epoch of creation of Life in Genesis does not appear *until the fifth day*,* and thus it comes much nearer to us than to the Hypozoic† period, and this is geologically accurate.

* Days of God.

† The period before Life.

Again, the creation of cattle and men, although they are introduced as the other creations of Life are introduced, are not placed in different days, but man follows the cattle in the same day, this also being in perfect harmony with geologic soundings. Mark also the recognition of birds having come from a water-life source; and of the relatively later integration of the sun and moon, while the creation of the stars is mentioned parenthetically.

Uniform with the discoveries of science, we find then in the History of the Creation as recorded by Moses, an Astronomic period, a Geologic period, and a Historic period. The Geologic period is divided in Scripture as in Science into a Hypozoic age, without life; a Palæozoic, † with plant life only (which in Geology is distinctive of it in abundance and universality); a Mesozoic, § remarkable for gigantic reptilian life; a Carnozoic, || with large land animals, cattle, etc.; and a post-tertiary or quarternary period, with man.

Lastly, successive *descent* is affirmed of the whole creation, inanimate and animate, while the part which the Environment of living creatures plays in their Evolution is admirably recognised by affirming of the earth in a *causative sense* that *it brought them forth*.

Thus the Records, scriptural and scientific, are sufficiently *alike* to demand of honest men the conviction that supernatural inspiration alone could have dictated the Writings, and empowered the Writer to detail truths *that no natural circumstances of his age could have presented to his mind*. And, they are sufficiently *unlike* to show that the supreme aim of the Writings was not to reveal the Cosmos, but to

† Ancient Life.

§ Middle Life.

|| New Life.

show us of Him with whom we shall have to do when Heaven and Earth are passed away.

Recognising therefore *all* the actualities of the universe and not a *part* of them only, we simply challenge the modern man, with all his modern wisdom, to tell the story of creation in the same number of words, in a form adapted to widely different ages, to equal these Writings of upwards of three thousand years ago.

CHAPTER V.

THE LAW OF THE UNIVERSE.

I HAVE spoken of the fundamental Law of Evolution being the Dynamic* form of the Moral Law of God. Let us examine this. The sum of the Moral Law, according to the highest Authority, is "Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind, and with all thy strength, and thy neighbour as thyself." Expressed in Dynamic terms, it is as follows. We are to exercise *all* those forms of internal *Energy*, known as feelings of Love, towards the Infinite being, God, and an *equal Energy* of Love towards our neighbour as to ourselves. Now let us enquire, what is the fundamental reason exhibited for this Law? Answer, It is that we are to regard Existences according to their *relative values*, thus giving an *Equilibrium* between internal Feelings and external Existences. God is infinitely valuable, and therefore demands *all* our *love* or *regard*. Men are accounted of

* *Dynamis*, power or force.

equal value, and therefore demand our *equal* love or regard. But this is none other than the Law of the physical universe. In the relationships of material bodies, in the equivalence of forms of energy, we perceive that the weight, the measure, the volume, the action and reaction, the balancing and counter-balancing, are always and evermore in absolute harmony with their *relative* physical *values*. It is commonly said, that the direction of motion is always in the line of least resistance, but this is not *perfectly* accurate, neither is it perfectly true to say that motion is always in the line of the greatest force. It is, however, perfectly accurate to say that the direction of motion will always be the resultant of the two, viz., according to the relative values of the matter and motion engaged. But this, as we have seen, is the dynamic form of the moral law of God, and therefore we perceive that *all* Action in the physical universe is according to this very Law. Whether we regard the stars in their courses, the rolling of the sea, the flowing of rivers, the trackless paths of winds, the formation of rain, dew, snow, and all other changes, we perceive only and ever, matter and motion obeying the dynamic form of the moral Law of God.

It was in accordance with this law that the universe and the earth were evolved. Given the physical values in matter and motion of the molecules engaged, then the evolution of the earth as has been described was the necessary outcome. The same holds good of the world of Life. This was the very Law which Selected and Preserved the Fittest to live, and that cut off the Unfit from amongst his fellows. Manifestly, since this was the Law of the creature's external world, demand was made upon

it to adjust itself according to this law, or to render up its life. The creature had to *balance* the outer forces of its surroundings, *according to their relative values*, by inner forces from itself, and in case of failure, death was the only alternative.

We find, therefore, an universal Law, common to the world of Matter and to the world of Life, different indeed in form, but fundamentally the same, and we find that this is the Law which has been given by God to man, and is written for him in the Scripture of truth.

CHAPTER VI.

EVOLUTION IN RELATION TO THE ADAMIC DISPENSATION.

FROM what has gone before, I trust the reader may gather the following important truth in regard to Life, namely, that Living Creatures can *exist* only by being in harmony or equilibrium with their surrounding circumstances, and that they can only *continue to exist* by keeping up that harmony or equilibrium; that is, by adjusting themselves so as to balance outer forces and changes by their own inner forces and changes. Looking back on the whole kingdom of Life, we perceive that death has reigned universally, for all have died. Now wherefore? Because all living creatures, sooner or later, failed to adjust themselves to the circumstances of their environment or surroundings, and died in consequence of their failure.

Mr. Herbert Spencer says, "Were there no changes in the environment, but such as the organism had adapted

changes to meet, and were it never to fail in the efficiency with which it met them there would be eternal existence and universal knowledge." * But a moment's thought shows us that this, to all appearance, renders *Eternal Life* altogether impossible for any creature. Because the Environment of Life is practically infinite, and nothing less than infinite power and wisdom would be required to give it that equilibrium or correspondence with limitless space, and time, and change, which is demanded for Everlasting Life.

We have already seen (page 3) that Equilibrium is the goal of Evolution. In the material universe all things keep advancing to a state of balanced-rest. In the kingdom of Life its ceaseless development has been towards the equilibrium of *perfect correspondence* between life and its environment. Every living creature shows us some degree of *adaptation* or *correspondence* between itself and its surroundings or *environment*. The more developed they are, or the later in time when they came upon the earth, the more perfect is this adaptation or correspondence, and the nearer they come to equilibrium. At the head of all Life stands man, the last to come forth, and the very top-most branch on the great tree of Life; and it is here we reach a crisis the most transcendently important in the whole History of the Creation.

On the one hand we see the course of Evolution steadily advancing towards equilibrium; we see that in ten thousand ways it declares this to be its goal. We hear its chief Expounder say, "The changes which Evolution presents, cannot end until equilibrium is

* "Principles of Biology."

reached ; and that equilibrium must at last be reached.”* “The adaptation of man’s nature to the conditions of his existence cannot cease until the internal forces we know as feelings are in equilibrium with the external forces they encounter.”* And “Evolution can end only in the establishment of the greatest perfection and the most complete happiness.”† On the other hand we have just seen that this is impossible. Mr. Spencer incidentally admits this much himself, saying, “It can be only in infinite time.”† That is, never. Had the great philosopher read his Bible as well as he read the book of Nature, he would have seen the solution of the mystery. Let us examine the situation.

Following the line of the Evolution of the Creature we come at length to man’s place, and if we look back along the line of the “Descent of Man” we observe that all the changing conditions affecting his ancestry may be classed as astronomic, geologic, and biologic, or in simpler terms, as physical and vital. And at once the question arises, Are there no more things in heaven and earth than these? Out of Infinity and Eternity, and from a form of Being “Inscrutable,” “to which no limit in Time or Space can be conceived,”* has there arisen no other changes affecting man than those which influenced his ancestry, and which he shares in common with the brute? “Believing, as we must, that the Evolution of the creature which has been going on for untold ages, is not coming to a full stop at man’s place in nature, we therefore look for further advancement, for further evolu-

* “First Principles,” H. Spencer.

† *Ib.*, page 505, 2nd Edition.

* “First Principles.” H. Spencer.

tion ; and agreeably to that by virtue of which man is highly developed, we look for further evolution in mind, and not in stomach or in legs, and therefore for new influences affecting him mentally."*

It is admitted, that with the dawn of true mind, and of considerable powers of imagination, there came to man the consciousness of the Inscrutable Being, God, the enjoyment of life, and *the longing for immortality*. To meet these states of mind *Natural Evolution* had nothing to offer. Consequently, a crisis in the "Descent of Man" was reached. If natural Evolution, according to its course, increased his mental representativeness, it but strengthened desires which it had no means of satisfying ; if it clipped the wings of these desires, it retraced its steps and degraded its offspring. But men's desires widen with the processes of the suns. And increased temporal well-being can have but one effect—increased desire for more ; and Immortality alone can complete the true Equilibrium. We have seen, however, that eternal life demands of the creature infinite wisdom and ability, and these are to it impossible conditions. And this brings us to enquire, Have the resources of Infinity offered any solution of this great difficulty?

In answering the question, let me refer the reader to page 15. We there learned that the outer world acted upon Life and Life re-acted upon the outer world, and this was seen to be one of the distinguishing powers of life. Add to this the fact that these *responses* which living Creatures make, show a distinct connection with their preservation,† and their distinctness in this direction

† "The Government of God."

* "Principles of Biology," H. Spencer.

becomes the more manifest the higher we ascend in the scale of life. Coming to man, let us enquire, What was the nature of the responses which the latest circumstances of Natural Evolution called forth from him? :—

From a mind trembling with awe at the stupendous array of scenic magnificence in his environment; from a mind in fear at the resistless might and relentless comportment of the natural forces which play around him; in sorrow, in suffering, in bereavement, and in death, in all lands, and among all peoples, kindreds, tongues, the universal response of man has been his cry to a PERSONAL GOD. Behold now the fitness of this *Response*. We have spoken of the infinity of man's Environment, and of his own necessarily limited powers; and this response of his, *is his true and perfect acknowledgement* of the actual circumstances *of himself and his environment*. With this the highest, loftiest response of the Child of the Universe, the time had come in the genesis of man, if there were a Living God, who could hear and answer to come to the help of His creature, and at once solve the mystery of his further evolution, and complete equilibration by ministering to him that guidance, protection, and help, in time of need which we have seen to be rigidly demanded, thus enabling him to adjust rightly and efficiently to the infinite states and changes of Eternity.

Now, if the Infidels are believed to be right, and as from Baal to his prophets, "There was no voice nor any that answered," then herein is a marvellous thing, and more *supernatural* than anything which lunatic fanaticism has ever offered us. The mighty travail of the universe carrying forward the Evolution of Life to its loftiest and most highly representative response, a response of such

power, persistency, and universality, and yet unlike those of the creature for millions of years, it meant nothing, anticipated nothing, referred to nothing! This is too much for honest scepticism. Ridiculous credulity may swallow it, but true rationalism cannot.

“Not he who believes that adaptation will increase is absurd, but he who doubts that it will increase is absurd. Lack of faith in such further evolution of humanity as shall harmonize its nature with its conditions, adds but another to the countless illustrations of inadequate consciousness of causation.” *

Thus in admirable terms Mr. Spencer keeps insisting upon the further evolution of man, while at the same time he keeps his feet upon *a path which leads not a single step further*. Behold now the perfection of the Scriptural testimony. At the very time when this great crisis arrived, and the distinct consciousness of the same arose in the mind of the Creature, namely, the sense of his dependency,—his finiteness in the midst of Infinity—it was then, that in answer to his highly representative thought and emotion, the Infinite of thought and feeling revealed Himself to man. The Ultimate Cause of the universe manifested Himself as a Personal Being, and came to the aid of His creature by putting him in direct obedience to Himself. A single man, whose evolution from lower forms of life may well be conceived to lie in the simple, completely-unified statement, “And the Lord God formed man of the dust of the ground,” was taken and specially dealt with. And at once we pass from the Natural to the Governmental doings of God, yet without there being the

* “Data of Ethics.” H. Spencer.

slightest break in the uniformities of the universe. Before this period, which may be called the "Advent of Divine Personal Government upon the Earth," the Creature lived and moved, and had its being in relation to the naturally conditioned mode of manifestation of God. We are now to consider its Life in relation to His Personal Manifestation; and we shall find, as has been said, that the advent of this event, the most transcendent which can well be conceived, succeeds in perfect uniformity to the old order of natural Law, and that all the circumstances "make one harmony as before, but vaster."

We have already seen the perfection of the first link, and perceive, that what seemed an insoluble mystery was at once solved by the revelation of God as a Personal Being. When Evolution had brought forth an intelligent Creature, possessing mind and language, and therefore capable of being instructed and guided by wisdom and truth, under the form of words—a true moral agent susceptible of moral government—then, and not till then, came the revelation of the Moral Governor of the Universe.

"The well nigh infinite probability of new influences of a mental and moral character coming to affect man, becomes a certainty in the light of historic evidence. We have evidence the most abundant the world contains, that some few thousands of years ago, influences of a remarkable kind must have come to affect mankind. I may say that all the surviving records of all nations, peoples, and tongues, in traditions, writings, and mighty monuments, bear witness to this. We perceive in all ancient history, men in millions, for thousands of years turning their attention back to this period, in testimony

to some great events which must then have arisen. They have in divers ways inscribed them on their walls, carved them on their monuments, raised their temples to them, and compiled their sacred books from them.*"

We shall now see the strongest reasons for believing that the Being thus manifested to man was none other than the Ultimate Cause of the universe Personally revealed, because we shall find that His Personal Governmental acts exhibit the utmost harmony with His naturally conditioned mode of operating in ancient geological eras.

The Selection of a single individual to be the head of future generations exhibits this harmony. The placing him under conditions of Direct Equilibration or obedience in Paradise is also in harmony;—abolishing all competition for means of subsistence. Indirect Equilibration reigned most in the earliest epochs, while Direct Equilibration was ever gaining the ascendancy in later ages. The form of obedience exhibits great perfection. It had to do with his *desire for food*, and this linked with the past order of Evolution. But it was given to, and abode in his mind under the form of words, and this linked with the future order of Moral Government. It was a vast but singularly fitting transition for man, that from being subject to the influences which ordinarily affect an Ox he came to hear the voice of words from the Infinite Mind of the Universe. And the reader will perceive that all the hopes of this finite being for Eternal Life rested, *according to the indication of science* upon his obedience to the Infinite Being.

The other governmental acts of God at this time

* The Government of God.

also exhibit great perfection. We know it is not an easy thing to get men to regard and to conform their actions to mere words. We know it is needful to make a profound and reiterated impression upon human moral agents, so that the ideas of the intellect may be enforced by feelings and emotions. Now if we study closely the second chapter of Genesis, we shall perceive that Adam was in existence before his home of Paradise was planted. It would appear that he was a spectator of this event and that here was a veritable special work of God. The assembling of the Brute Creation was another sign wrought to impress the man; and last and chief of all, the special creation of Eve, just as it is written, filled up the utmost measure of moral suasion necessary to guide him in the way of the Commandment. And the woman received all these from the lips of her husband.

Here we see God's will for man in this world. He made them Male and Female, He consecrated them Husband and Wife, He gave them Paradise, the "Garden of Delight," for a sweet, sweet home. Alas! for the transgression which traversed so sweet a will!

The next link between past and present Evolutionary changes is the sanction attached to the commandment given to the first immortal varieties of our race. It was, "The day that thou eatest thereof thou shalt surely die." We have seen that death was ever the penalty of failure to adjust throughout all past geologic time. I do not mean that the lower creatures were *properly* moral agents, or that their death was *properly* a penalty for disobedience. Yet in an important sense these things were so, and they were the true types and actual embryos of future moral relations. "Strange as the conclusion looks," says

Mr. H. Spencer, "it is nevertheless a conclusion to be drawn here, that the performance of every function, is in a sense, a moral obligation." Again, "Death by starvation from inability to catch prey, shows a falling short of conduct from its ideal." *

CHAPTER VII.

THE FALL, AND THE PATRIARCHAL AND JEWISH DISPENSATIONS.

THE day upon which man first became a proper moral agent, and became subject to personal moral government after the form described, he also became liable to the personal influence of other beings who had their genesis long before his own. This is credible enough. We stand, as it were, between two eternities. There has been infinite duration behind us, as there is infinite duration before us. It is therefore credible enough that intelligent beings should have been brought forth in that infinite past--beings whose range in space is not round one small world only, as is ours, but from world to world unnumbered in the boundless immensity of heaven. The Doctrine of Evolution strongly suggests this; *an ever widening range for Life is a leading characteristic of its course of development.*

That some of these beings should have done wrong, and that they try to get others wrong also, is unhappily only too easy of belief by us. The temptation in Eden is therefore upon all sides only too credible. A spiritual Being, with powers which we cannot be expected to

* "Data of Ethics,"

understand, assailed the peace of Paradise. He addresses himself to the woman as the weaker vessel, and endeavours to break the power of the strongest motive before her mind, namely, the dire *deterrent* of death, while at the same time he held up to her mind *inducements* to disobey the Lord. And thus the temptation, as recorded, is the very perfection of moral suasion infamously employed. Both the woman and the man had a sufficiency of motive before their minds to enable them to resist this attempt upon them or to call upon God—in the language of Evolution, to enable them to adjust themselves at the incidence of this new influence in their environment. Mind is not governed like matter, and motives do not *compel* mind to act as force does matter. Any further motives would have been *undue influence*, which no righteous being would employ, and when they fell,—like Israel in after time, “there was no remedy.” God could challenge the universe and inquire, Is there anything more that I could do, that I have not done? To have used a greater amount of influence, even had it restrained them from transgression, would eventually have begotten a greater evil, and would have been an unrighteous thing in itself.

They sinned under Governmental Law, and therefore they were judged Governmentally. They were summoned before God and examined, and received sentence according to the usual penalty which we have seen reigned from the beginning. But this great event revealed more than penal judgment. The fallen race of man was not to perish, but to be saved by a marvellous dispensation, which none but the thoroughgoing Evolutionist can fully appreciate as regards its philosophy. From being

under Direct Equilibration they were thrust back under Indirect Equilibration. He was sent forth from the garden "to till the ground from whence he was taken." He had now to "*struggle for the means of subsistence*," * the *conception of the woman was multiplied*, and it was declared that of *her Seed* would come the salvation of the lapsed race. This, in every point, is just as perfect as it could be,

THE MULTIPLIED OFFSPRING,
THE STRUGGLE FOR THE MEANS OF SUBSISTENCE,
THE REIGN OF DEATH,
THE COMING EQUILIBRATED SEED,

which would overcome the Evil influence by which they had fallen and again Equilibrate the Race, exhibit as plainly as possible that man was again put under the great Process of Indirect Equilibration.

Yet while it was the Process of Indirect Equilibration, it contained the *new* provision of saving the *transgressing individuals*. This was a new thing in the system of Evolution. Heretofore the transgressing individuals all perished, while their seed alone were selected, equilibrated, and preserved. This *new* dispensation demanded accordingly a *new* change in the Process of Equilibration, and since it intended the selection and preservation of the transgressor, it was therefore in one point the very *reverse* of the natural Process. The ancient Process was strictly one of rigid Law, of firm Justice; but here we reach the *quality of mercy* which rejoices *against* judgment. Law and Justice defend the innocent and punish the guilty. They know nothing of Mercy. *Yet, since the supreme and ultimate end of the Law is the*

* Professor Haeckel's more accurate formula for the "struggle for existence."

good of sentient beings, it admits of such administration as will achieve this glorious end, provided the Law is "magnified and made honourable." If such were not the case, Mercy would be impossible, for it is the guilty alone who are the objects of Mercy. Our Courts of Law never exercise mercy. We sometimes hear of a jury recommending a prisoner to the mercy of the Court *on account* of some circumstance. But this is highly inaccurate. They ought to say "We find the prisoner guilty, but in *justice* to him recommend a mitigated penalty on account of this or that circumstance." The sphere of Mercy is properly only where, in the case of the guilty, there is no mitigating circumstance whatever. Such is the mercy of God. Yet it cannot be exercised without an adequate reason, otherwise it would amount to an abrogation of Law. The Atonement to Law is God's sufficient and righteous reason for His mercy. Mercy and Grace, therefore, except in their ultimate end, show a form of Governmental administration the *reverse* of Law and Works.

The Atonement which allows of this administration is a *Reciprocal Substitution* of the innocent for the guilty, and the guilty for the innocent, which is well illustrated in the Dispensations after the Fall. In Animal Sacrifice it was the innocent or fit that died, and the guilty or unfit that were preserved. The man took a lower creature, "without spot or blemish," that is to say, the *fittest*. "If the creature selected had a blemish, it was *unfit* by reason of this blemish, and its *death* could only atone for this unfitness according to the Law of the universe, (see Diagram page 30, and page 22). But when the victim was fit, without spot or blemish, then its peculiar and unnatural Death

must have had *some other significance*, because the Law of the universe rules to the selection and preservation of the fittest."

"Throughout the descent of man, the ordinances of the universe had shed the blood of millions because they were unfit and had failed to adjust to the states and forces of their environment. Man himself had now also failed and become unfit, but there was a salvation provided for him in the Race. There was a fit Seed of Promise in the human family, a Seed whose power was retrospective as well as prospective, and the spotless victim the man selected represented this. So the unfit man, with the fit victim, arose and drew near unto the Lord God of heaven and earth, of whom are all things, and by whom are all things.

"The death this creature died was unique, and different from all former ways of death. Heretofore living organisms died as prey, as enemies or competitors, or by some cosmic changes, by failure in some form. This, however, was a new kind of death. The creature died for unfitness, yet not its own, for another confessed them over its head, and then it was *slain*. Its blood, which is an excellent type of Life, was shed and taken instead of the man's life. The earth, out of which man was taken, received the blood instead of his. Moreover, the body of the victim was placed upon an altar and burned, so that its complete dissolution was accomplished—dust to dust, ashes to ashes." The Law, for the ends of Mercy, permitting substitution at one point, had its demand for Life satisfied, because of transgression or failure to adjust, and had its Equilibrium reached in the ashes of the altar; "an Equilibrium common to the natural law of geologic eras, and

to the spoken and written Law of the Government of God. Indeed it is manifest that they are one and the same." *

Of the types and shadows of the Jewish Dispensation, the most significant were the Tabernacle and Temple. "In the midst of the *selected* nation was raised a *meeting place* between God and man. Towards this place all eyes were directed; towards this place all men were commanded to draw near. With its holy place, its cherubim-guarding veil, its smoking altar at some distance in the foreground, it was a perfect picture of the relationship of man to God after he was expelled from Paradise and abode still before it.

"By its atoning service for transgression and sin, and by the entrance of a man by blood within the inner veil, it foreshadowed the return of man by a new way to the presence and paradise of God.

Here we meet with a new and really satisfactory explanation of the cherubim, or *composite figures which included* the heads of the living creation, the veritable ultimate branches on Evolution's tree of Life, viz., a man, a lion, an ox, and an eagle. † As composite figures they showed the oneness and common origin of all living creatures; as guardians together with the "flaming sword revolving upon itself" (comp. Ezekiel's vision, ch. i.)

*"The Government of God."

† "Though the exact form of the cherubim is uncertain, they must have borne a general resemblance to the composite religious figures found upon the monuments of Egypt, Assyria, Babylonia, and Persia." *Smith's Dictionary of the Bible*.

"There are certain marked characteristics that seem always to belong to the cherubim, wherever they distinctly appear, one is that they are composite animal forms; and when these animal forms are specified, they always consist of the likeness of man, the lion, the ox, and the eagle." *The Imperial Dictionary*. Patrick Fairbairn D.D.

keeping man from paradise and life, they signified that he had fallen, and was debarred from life by that Law which had reigned throughout the entire genesis of the universe, from the revolving flaming nebula to the coming forth of the highest forms of Life. As they stood upon the Mercy-seat, they are represented as witnessing in the blood sprinkled thereon, the fulfilment of the law of all past ages in regard to living creatures,—the law under which the creatures which they represent had been developed, namely, the sacrifice or loss of life on account of failure to adjust.

“The whole scheme is the perfection of simplicity and of scientific accuracy. The pathway out becomes the pathway back again; then stained with sin, now sprinkled with the blood of atonement on account of sin. But still more wonderful and beautiful, the way back to God was the way the Creature had been traversing, when for millions and millions of years it drew near to His presence. Some of the Life first given by the Spirit of God to this earth had never died, but had an unbroken descent, flowed on through channels of flesh and blood, when the mountains were being brought forth and the deep foundations of the world laid. Down the corridors of time, by altars of earth sprinkled with the blood of the erring and unfit, moulded and formed in the descent, ever being conformed to the Law of God, ever receiving the correction of God, and having been made perfect through suffering, out of great tribulation it finally advanced to the awful presence of the great and the terrible God. And the man who stood forth at the end of days as the accepted companion of the Living God, could he have looked back upon the events of his long descent, would

have beheld a great multitude of lower creatures which had suffered and shed their blood for his sake. And now since by unfitness or sin he himself had fallen from the presence of God, and a way of return through the sufferings and blood shedding of another is opened anew, we behold him again drawing near, along the ancient path by which he first climbed to God.”*

See in the light of science, what sublime dimensions the truths of Holy Writ received.

I may refer here to a principle running through the Mosaic Dispensation, which bears out Mr. Darwin in his interpretation of the Evolution of the Moral faculty. This principle is well seen in the law relating to clean and unclean animals. Linking on to instincts already present in some degree in men, commands were given them to regard certain animals as clean, and certain as unclean. The *external appearances* of the creatures which *met the eye* were made the foundation of these commands. What now was the consequence of this discipline to the Israelite faithfully instructed in the law of his God? His mind was continually being *exercised in the art* of putting a difference between, and of regarding certain objects *as clean*, and certain *as unclean*, and this developed his moral faculty for the highest uses in other directions distinct from these special school-masterings of the Law. Here also, we have an explanation of the hare and rabbit being classed as Ruminants by the Law. They appeared to the eye to chew the cud, and the average Israelite was unequal to distinctions which were other than they appeared to be; many exceptions would have been fatal to his lesson in moral distinctions.

* “The Government of God.”

CHAPTER VIII.

EQUILIBRATION GOVERNMENTALLY EXERCISED.
THE CHRISTIAN DISPENSATION.

WHILE coming mercy to fallen man was thus written in the blood, and shining from the altars of the innocent victims who died and were dissolved to the dust of the earth in his stead, the Ancient Law of Equilibration was still nevertheless being governmentally exercised in its ancient form. The Deluge, in whatever form it happened, for happen it did, as the universal testimony of many nations proves, was the *selection* and *preservation* of the *fit* man, Noah, and his family, and the destruction of his *unfit* fellows. Abraham and his seed were governmentally selected. The first generation of Israel in the wilderness was destroyed for unfitness, the second selected and preserved. The Canaanites were destroyed for the same solid reason. And, indeed, down the ages, the special governmental acts of God show us the same unbroken uniformity. At length we reach the coming of the Promised Seed of our race, "made of a woman, made under the Law," to which He rendered perpetual obedience, and therefore to which He owed no Life, and *no suffering*. "He was the Equilibrated Variety of the race, in whom all the promise of future life and equilibration rested. But He was more than this. The equilibrated varieties of the geological ages were individuals like others, only they were in a state of more or less equilibrium with their environments. But this Man was that uncreated Being, unknowable except by revelation, and manifested to men as the Son of God, by whom

all things were created, and, what is of most importance in this connection, *in Him the race subsisted* (Col. i. 17). When, therefore, He suffered for the race it was not only one individual suffering for others, but it was the Head in union with the Members, suffering for its Members; and this fact meets all the cavils about the transference of guilt and righteousness." *

The Law of the universe ever demanded Life on account of sin or unfitness, *and it was generally paid with suffering*. Again, according to Mr. Spencer and Professor Bain, suffering is always *accompanied with loss of life* in some degree. Hence every creature out of harmony with its circumstances was to that degree suffering and losing life. And so we see the importance of the two-fold truth, that "He suffered for our sins," and that "He gave Himself for us." "Before His sufferings and death, gathering His witnesses, they met to eat the Pass-over. He took the cup and said 'This is my blood of the new covenant, which is shed for many.' For millions of years the covenant had been the blood shedding of all who failed in the race of life. But here was a *new covenant*. Standing in a world of fallen men who had altogether become unfit by reason of iniquity, transgression and sin, was ONE without spot or blemish; and behold He, not they, was to become the victim. It was therefore, a new covenant in His blood." "He trod the wine-press of the fierceness and wrath of Almighty God, and of the people there was none with him. He was alone, and felt the horror of being forsaken of God, and all the anguish of spirits lost, *on the scale of Infinite Being*."

* "The Government of God."

He died the *second death* first—drained the cup of woe and suffering unutterable until it was finished, and He bowed His head and died.”

“Of the Atonement of Christ the leading symbol is the Blood. And the reason is simple and obvious—it is an admirable symbol of Life. To shed blood is to take life. It also symbolizes suffering. When we see blood, we instinctively feel that not only has some living thing lost this ‘life’s blood,’ but that it has suffered also.”

“Throughout the geologic ages of the genesis of the Creature, the blood of the erring, the unfavoured and unfit, was continually being shed. The blood of those dying of natural decay was not shed; it was those that failed in the conduct demanded of them that were slain, and, generally, their blood shed upon the earth. Again, throughout these ages we have seen (page 23) that the death and exclusion of the unfit bore away from the Race its unfitness—bore away its sin.”

“Now Christ was numbered with these transgressors, and of Him it is written, that He bears away the sin of the world, that He was slain and hath redeemed us to God. ‘Thou wast slain and hast redeemed us to God by thy blood, out of every kindred, and tongue, and people and nation.’ Behold, now, and see what glory there is in the good old hymn* :—

‘There is a fountain filled with blood,
Shed from Immanuel’s veins;
And sinners plunged beneath that flood,
Lose all their guilty stains.’

“How rigidly philosophic and scientific we are when we sing this hymn. But behold again, and see how the poor

* “The Government of God.”

and unlearned have had this, the chiefest wisdom of the universe, before their minds these many centuries." *

Lastly, Science unites its testimony with that of the Scriptures in leading us to expect a Governmental Judgment. A judgment which must be according to the ordinances of the universe, must therefore issue in the *choice* and *preservation* of those members of our race who have adjusted themselves to the Divine Governmental Influences now affecting them; and in the *rejection*, *sufferings*, and *second death* of all who have failed to adjust.

The diagram (p. 56-57) will, I hope, help to make some of the truths we have been glancing at quite plain.

Notice in connection with the Reciprocal Substitution shown in the Diagram the following Scriptures:—

"He hath made Him to be sin [*i.e.*, a sin-offering] for us; that we might be made the righteousness of God in Him" (2 Cor. vi. 21).

"His own self, bare our sins, in His own body on the tree, that we being dead to sin, should live unto righteousness: by whose stripes ye were healed" (1 Pet. ii. 24).

"Christ also hath once suffered, the just for the unjust, to bring us to God" (1 Peter iii. 18).

Look up your left hand side of the Diagram and see how through all geologic time that, "He was numbered with the transgressors" (Mark xv. 28), and was "The Lamb slain from the foundation of the world" (Rev. xiii. 8).

Observe that since according to the doctrine of Evolution it was by the law of inheritance, that the fit qualities of the Equilibrated were transmitted to others;

* "The Government of God."

INDIRECT EQUILIBRATION,
UNDER
NATURAL LAW,
IS WHERE

GEOLOGIC TIME.

BY DEATH THROUGH FAILURE OF AND THE SELECTION AND PRE-
THE UNFIT BEARING AWAY THE SERVATION OF THE FITTEST,
UNFITNESS OF LIVING CREATURES,

THE CREATURE BECAME DEVELOPED AND EQUILIBRATED TO
THE FULNESS OF THE STATURE OF A MAN.

*Direct Equilibration of Man as a subject of Divine Moral
Government. (Genesis iii. 8.) viz. :—*

*He was placed in harmony or equilibrium with his environment,
and the struggle for the means of subsistence (Genesis ii. 16)
and death abolished.*

HISTORIC TIME.

Failure of Man.

*Governmentally Judged, and sentenced to be again put under
Indirect Equilibration, viz. :—*

*The offspring multiplied, (Genesis iii. 16.) The struggle for the
means of subsistence resumed, (Genesis iii. 17-19.) Death reigning.*

INDIRECT EQUILIBRATION,

UNDER

GOVERNMENTAL LAW,

IS WHERE

By Death, on account of failure of the Unfit, *i.e.*, the antediluvians, the first generation of Israel, the Canaanites, and others, who were "cut off" from among the people, bearing away the unfitness of the Race,

And the selection and preservation of the Fittest, *i.e.*, Noah and his family, Abraham, the second generation of Israel, and others, who were preserved,

THE RACE BECAME MORE OR LESS EQUILIBRATED.

The Law of God published, by which all men are shown to have become guilty before God.

INDIRECT EQUILIBRATION,

UNDER GOVERNMENTAL LAW, WITH RECIPROCAL SUBSTITUTION, IN TYPE OF MERCY TO MAN, IS WHERE

By Death of a lower animal as the fittest, "without spot or blemish," but accounted as bearing away the unfitness of the unfit,

And the selection and preservation of penitent unfit men, their unfitness not being accounted to them,

THE RACE WAS ACCOUNTED EQUILIBRATED OR RECONCILED.

INDIRECT EQUILIBRATION,

UNDER THE DISPENSATION OF MERCY, WITH RECIPROCAL SUBSTITUTION FOR THIS END, IS WHERE

By Death of the Head of the Creation incarnate in the Race as the fittest, but accepting, and bearing away the unfitness of the Race,

And the selection and preservation of the penitent unfit to remission of their unfitness, and a new birth,

THE RACE IS EQUILIBRATED, RECONCILED, OR JUSTIFIED AND SANCTIFIED.

NOTE.—Selection in nature, and Choice and Election in Scripture, are identical in meaning. From the Fall all true seekers of God were intrinsically justified or equilibrated according to the last section of this table. The dispensation of Love overlaid and covered the dispensation of Law.

even so, also, according to the Scriptures by a *new birth*, by being born of God, we receive the fit qualities for everlasting life.

At page 30 we have read that the process of Indirect Equilibration has also the function of sustaining the perfect race in its fitted condition. The Christian will see the analogue of this in that continuous sanctification of man, through the ever enduring priesthood of Christ.

CHAPTER IX.

CONCLUSION.

THE philosophical system of knowledge of the Cosmos is not restricted to the past or present only, but like the revealed system it speaks also of the future. Compared with the latter, it does but give barely a skeleton, yet this nevertheless, is of great importance.

Evolution, or the building-in and building-up, of various forms of existences, does not give us their entire history. It comes to pass that the tree or the man who has thus been formed, at length falls. Another Process the reverse of Evolution, succeeds, namely, Dissolution, and the matter which made up the tree or the man comes to be *dissolved* and again *widely diffused*. The same course of events holds good for the entire universe.

"When evolution," says Mr. Spencer, "has run its course, . . . when it has reached that equilibrium in which its changes end; it thereafter remains subject to all actions in its environment which may increase the quantity of motion it contains, and which in the lapse of time are sure, either slowly or *suddenly*, to give its parts

such excess of motion as will cause disintegration. According as its equilibrium is a very unstable or a very stable one, its dissolution *may come quickly* or may be indefinitely delayed—*may occur in a few days* or may be postponed for millions of years.”* Without quoting at greater length, it suffices to say that Mr. Spencer, supported by the teachings of leading men of science, considers that true knowledge as regards the present universe, points to a further period of Evolution, and then comes Dissolution. The special events of the first-further period will be the extinction of the sun and stars, the gravitation of the planets to these bodies and the gravitation of star to star, of system to system. And in the succeeding Dissolution there will be a return to the incandescent state of nebulous matter.

And what now are the teachings of the ancient Bible? It is written:—“For the stars of heaven and the constellations thereof shall not give their light: the sun shall be darkened in his going forth, and the moon shall not cause her light to shine” (Isaiah xiii. 10). “And all the host of heaven shall be dissolved, and the heavens shall be rolled together as a scroll: and all their host shall fall down, as the leaf falleth from off the vine, and as a falling fig from the fig tree” † (*Jb.* xxxiv. 4). “Lift up your eyes to the heavens, and look upon the earth beneath: for the heavens shall vanish away like smoke, and the earth shall wax old like a garment” (*Jb.* li. 6). “The sun and the moon shall be darkened, and the stars shall withdraw

* “First Principles.” Italics are mine.

† It was from this incident that Newton reasoned up to the gravitation of the planets,

their shining" (Joel iii. 15). "But the day of the Lord will come as a thief in the night; in the which the heavens shall pass away with a great noise, and the elements shall melt with fervent heat, the earth also and the works that are therein shall be burned up" (2 Peter iii. 10). "Looking for and hasting unto the coming of the day of God, wherein the heavens being on fire shall be dissolved, and the elements shall melt with fervent heat" (Ib. iii. 12). And many like words.

But this is not all. Beyond this universal Dissolution science believes in another Evolution*—a new creation; and Scripture declares, "Behold, I create new heavens and a new earth: and the former shall not be remembered nor come into mind" (Isaiah lxv. 17). "We, according to His promise, look for new heavens and a new earth, wherein dwelleth righteousness" (2 Peter iii. 13).

Comment is useless,—and when we behold Science justifying the wisdom of the Scriptures upon every point, past, present, and to come,—controversy is excluded. At the end of days another Witness has arisen to testify for God, and set its seal to the testimony of God. The stones cry out and rebuke the madness of nature's prophets; the fossil in the rock proclaims that it has everything to do with the Law, the Gospel, and the Atonement of our God. The Natural Selection of past geologic eras has become the Governmental Election of the present historic times; the natural Exclusion and Destruction of the past has become the Governmental Reprobation and Destruction of body and soul in hell, of the present. It is now the creed of Science, as well as the creed of the Church, that

* "First Principles," pp. 529-537, 2nd Edition.

“Whosoever will be saved : before all things it is necessary that he holds the *Christian* Faith. Which faith except every one do keep whole and undefiled, without doubt he shall perish everlastingly.”

Behold, I set before you Life and Death, blessing and cursing, therefore choose life that you may live.

There is no time for cavilling when rigid Science attests the solemn sanctions of God's eternal Law. Seek that mercy which has cost even God very dear. The moral Government of God is around us, beseeching us to accept His mercy. Have you ever known anyone who so loved you as to suffer for you? Did it move you? The highest moral influence in the universe is personal example. “In Jesus Christ, God has given us the influence of His own example, exhibited His own love, His own compassion, His own self-denial and long suffering under abuse from His creatures; has exhibited these virtues to the inspection of our senses, and laboured, wept, suffered, and died for man.”

This is the highest revelation of God that could be given; the creation of the universe is as nothing to it. “That a human brain was behind His forehead, and a human heart beating in His breast,” that He suffered because love made Him suffer, that in His wounds all human sorrows and human sins might be for ever hid, is the most sublime, the most moving, impressive, and influential spectacle in the universe.

What angel can compute the guilt of those who would weaken its moral influence on the minds of men !

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